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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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PATENT DEPARTMENT
SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP
FOUR TIMES SQUARE
NEW YORK, NY 10036

EXAMINER

STAICOVICI, STEFAN

ART UNIT PAPER NUMBER

1732

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,583

Applicant(s)

DAVIS, STEPHEN J.

Examiner

Stefan Staicovici

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 16-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s): _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-15, in Paper No. 6 is acknowledged. Claims 16-36 are withdrawn from consideration as drawn to a non-elected invention.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: "Method of Manufacturing a two Piece Sports Racquet".

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "75a", "77a" and "79a" (page 12, line 13). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In claim 12, it is not clear how the pins are retained in the molded structure as integrally molded therein, if in claim 1, from which claim 12 depends, said pins are specifically removed. Further clarification is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 4, 8, 11, 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Mott (US Patent No. 4,842,798).

Mott ('798) teaches the claimed process for making a composite sports racquet including, providing a mold (10) having a first mold (bottom) (14) and a second mold (top) (12), wrapping a plurality of fiber layers around an inflatable core to form a wrapped core, placing a first wrapped core into said first mold (14) in mold cavity (16b), positioning a plurality of pins (32) over said first wrapped core, placing a second wrapped core over said pins into said second mold (12) in mold cavity (16a) (see Figure 1), closing said first and second molds (12, 14), inflating said first and second wrapped cores while introducing a resin into said mold cavities (16a, 16b),

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heating said mold (10) to cure said resin, removing said mold (10) and removing said pins (32) to form said composite sports racquet with string holes formed therein (see col. 1, line 48 through col. 2, line 13). Further, it should be noted that because Mott ('798) teaches inflating said cores, then it is submitted that an air source is coupled to said inflatable cores in the process of Mott ('798). Furthermore, it is submitted that said first and second wrapped cores bond in the areas not covered by said pins (32) during inflation of said first and second wrapped cores in order to form a structure than can function as described by Mott ('798). Furthermore, it is submitted that said pins are secured to said first mold in order for said pins to be able to be fixed during the molding process of Mott ('798) (see Figure 2).

Regarding claim 2, Mott ('798) teaches a racquet frame head (see Figure 5). Further, Mott ('798) teaches a first mold cavity (16a) and a second mold cavity (16b) such that said first wrapped core and said second wrapped core can come in contact between said pins (32) (see Figures 1 and 2).

In regard to claim 4, Mott ('798) teaches a plurality of pins (32) secured to a first plate (28) and a second plate (30).

Regarding claim 8, Mott ('798) teaches a plurality of pins (32) secured to a first plate (28) positioned outside said frame. Further, Mott ('798) teaches that said pins (32) have a rounded base (see Figure 2). It is submitted that a rounded string hole will result because said pins (32) have a rounded base.

In regard to claim 11, Mott ('798) teaches a plurality of pins (32) that are parallel (see Figure 2).

Specifically regarding claims 13-15, Mott ('798) teaches a plurality of pins (32) secured to a first plate (28) positioned outside said frame and a plurality of pins (32) secured to a second plate (30) positioned inside said frame. Further, Mott ('798) teaches that said pins (32) are coaxial and are removable (see Figure 4). Furthermore, Mott ('798) teaches that said pins (32) have a rounded base in contact with both said first and second plates (28, 30) (see Figure 4). It is submitted that said resulting string hole will have both its ends rounded because said pins (32) are rounded at both ends (see Figure 4).

8. Claims 1-3 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kicherer (US Patent No. 3,930,920).

Kicherer ('920) teaches the claimed process for making a composite sports racquet including, providing a mold (30) having a first mold (bottom) (9a) and a second mold (top) (9b), wrapping a plurality of resin pre-impregnated fiber layers (4, 5) around an inflatable core (3) to form a wrapped core, placing a first wrapped core into said first mold (9a) in mold cavity, positioning a plurality of pins (10) (inserts) to said first mold (9a), placing a second wrapped core over said pins into said second mold (9b) (see Figure 2), closing said first and second molds, inflating said first and second wrapped cores while heating said mold to cure (flow) said resin, removing said mold and removing said composite sports racquet with string holes formed therein (see col. 4, lines 35-42 and col. 5, lines 24-49). Further, it should be noted that because Kicherer ('920) teaches inflating said cores, then it is submitted that an air source is coupled to said inflatable cores in the process of Kicherer ('920). Furthermore, it is submitted that said first and second wrapped cores bond in the areas not covered by said pins (10) during inflation of said first and second wrapped cores in order to form a structure than can function as described by

Kicherer ('920). Furthermore, it is submitted that said pins are secured to said first mold in order for said pins to be able to be fixed during the molding process of Kicherer ('920) (see Figure 2).

Regarding claim 2, Kicherer ('920) teaches a racquet frame head (see Figure 1). Further, Mott ('798) teaches a first mold cavity (9a) and a second mold cavity (9b) such that said first wrapped core and said second wrapped core can come in contact between said pins (10) (see Figure 2).

In regard to claim 3, Kicherer ('920) teaches that the ends of said wrapped cores are kept separate during molding of said composite sports racquet (see Figure 1).

Specifically regarding claims 6-7, heating said mold to cure (flow) said resin (see col. 5, lines 5-10), specifically an epoxy resin (thermosetting resin). Furthermore, it is submitted that said first and second wrapped cores bond in the areas not covered by said pins (10) during inflation of said first and second wrapped cores in order to form a structure than can function as described by Kicherer ('920).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4-5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kicherer (US Patent No. 3,930,920) in view of Hong (US Patent No. 5,234,657).

Kicherer ('920) teaches the basic claimed process as described above.

Regarding claims 4-5 and 11, Kicherer ('920) does not teach that said pins are parallel and secured to a plurality of pin plates. Hong ('657) teaches a molding process for making a composite sports racquet including providing a plurality of pin plates (13) having pins (131) thereon, said pin plates being positioned around the head of said resulting sports racquet and being part of the resulting mold cavity (see Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to have used the pin plates of Hong ('657) in the process of Kicherer ('920) because, Hong ('657) specifically teaches that such pin plates provide for an improved molded product and also because, positioning of said plurality of pins is faster and less complex, hence providing for a reduction in processing time and as such, an increase in productivity.

11. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kicherer (US Patent No. 3,930,920) in view of Hong (US Patent No. 5,234,657) and in further view of Staub *et al.* (US Patent No. 4,183,776).

Kicherer ('920) in view of Hong ('657) teach the basic claimed process as described above.

Regarding claims 8-9, although Kicherer ('920) in view of Hong ('657) teach a plurality of pin plates placed around the exterior of the head of said resulting molded composite sports racquet, Kicherer ('920) in view of Hong ('657) do not teach pins having a rounded base. Staub *et al.* ('776) teach a molding process for making composite sports racquet including, providing pins (122) having a rounded base (see col. 8, lines 44-52). Therefore, it would have been obvious for one of ordinary skill in the art to have provided pins with a rounded base as taught by Staub *et al.* ('776) in the process of Kicherer ('920) in view of Hong ('657) because, Staub *et al.* ('776)

specifically teaches that a rounded base produces a rounded hole, hence providing for an improved molded product.

In regard to claim 10, Hong ('657) teaches a bottom mold (11) having a sunken ledge for accommodating pin plates (13) (side molds) (see Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a sunken ledge to accommodate the pin plates of Hong ('657) in the process of Kicherer ('920) in view of Staub *et al.* ('776) because, Hong ('657) specifically teaches that such pin plates provide for an improved molded product and also because, positioning of said plurality of pins is faster and less complex, hence providing for a reduction in processing time and as such, an increase in productivity.

12. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kicherer (US Patent No. 3,930,920) in view of Natsume (US Patent No. 5,516,100).

Kicherer ('920) teaches the basic claimed process as described above.

Regarding claims 12-13, Kicherer ('920) does not teach integrally molded pins. Natsume ('100) teaches a process for making a composite sports racquet including, providing a mold (30) having a first mold (bottom) (32) and a second mold (top) (31), wrapping a plurality of resin pre-impregnated fiber layers around an inflatable core (21) to form a wrapped core (20), placing a first wrapped core into said first mold (31) in mold cavity, positioning a pin plate (13) having a plurality of pins (13) thereon, placing a second wrapped core over said pins into said second mold (32) in mold cavity (see Figure 7), closing said first and second molds, inflating said first and second wrapped cores while heating said mold (30) to cure (flow) said resin, removing said mold (30) and removing said composite sports racquet with string holes formed therein (see col. 3, lines 16-54). Further, Natsume ('100) specifically teaches that said pins (13) are retained in

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said resulting molded composite sports racquet. Furthermore, Natsume ('100) specifically teaches that said pins have a shoulder that produces a rounded edge (see Figures 10-11). Therefore, it would have been obvious for one of ordinary skill in the art to have provided the pins of Natsume ('100) in the process of Kicherer ('920) because, Natsume ('100) specifically teaches that such pins allows for an improved process by reducing processing time since a step of removing the pins is eliminated and hence productivity is increased.

13. Claim 12 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Mott (US Patent No. 4,842,798) in view of Natsume (US Patent No. 5,516,100).

Mott ('798) teaches the basic claimed process as described above.

Regarding claim 12, Mott ('798) does not teach integrally molded pins. Natsume ('100) teaches a process for making a composite sports racquet including, providing a mold (30) having a first mold (bottom) (32) and a second mold (top) (31), wrapping a plurality of resin pre-impregnated fiber layers around an inflatable core (21) to form a wrapped core (20), placing a first wrapped core into said first mold (31) in mold cavity, positioning a pin plate (13) having a plurality of pins (13) thereon, placing a second wrapped core over said pins into said second mold (32) in mold cavity (see Figure 7), closing said first and second molds, inflating said first and second wrapped cores while heating said mold (30) to cure (flow) said resin, removing said mold (30) and removing said composite sports racquet with string holes formed therein (see col. 3, lines 16-54). Further, Natsume ('100) specifically teaches that said pins (13) are retained in said resulting molded composite sports racquet. Furthermore, Natsume ('100) specifically teaches that said pins have a shoulder that produces a rounded edge (see Figures 10-11). Therefore, it would have been obvious for one of ordinary skill in the art to have provided the

pins of Natsume ('100) in the process of Mott ('798) because, Natsume ('100) specifically teaches that such pins allow for an improved process by reducing processing time since a step of removing the pins is eliminated and hence productivity is increased.

14. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kicherer (US Patent No. 3,930,920) in view of Mott (US Patent No. 4,842,798).

Kicherer ('920) teaches the basic claimed process as described above.

Regarding claims 13-15, Kicherer ('920) does not teach coaxial pins that have both ends rounded and are removable. Mott ('798) teaches a plurality of pins (32) secured to a first plate (28) positioned outside said frame and a plurality of pins (32) secured to a second plate (30) positioned inside said frame. Further, Mott ('798) teaches that said pins (32) are coaxial and are removable (see Figure 4). Furthermore, Mott ('798) teaches that said pins (32) have a rounded base in contact with both said first and second plates (28, 30) (see Figure 4). It is submitted that said resulting string hole will have both its ends rounded because said pins (32) are rounded at both ends (see Figure 4). Therefore, it would have been obvious for one of ordinary skill in the art to have provided the pins of Mott ('798) in the process of Kicherer ('920) because, Mott ('798) specifically teaches that such pins allow for an improved process by reducing processing time since a step of removing the pins is eliminated and hence productivity is increased.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

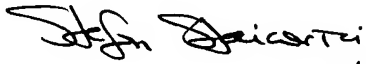
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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (703) 305-0396. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM and alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni, can be reached at (703) 305-5493. The fax phone number for this Group is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Stefan Staicovici, PhD


Primary Examiner 9/30/03

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September 30, 2003